Citation Evidence Report

EB-2 NIW Petition — National Interest Waiver

Matter of Dhanasar · Prong 2 (well-positioned)

Jonathan Copp

UCSD School of Medicine, UC Davis

Google Scholar profile

Generated 2026-05-21 by CiteMap. This report organises Google Scholar citation data into the structure USCIS adjudicators apply to Prong 2 of Matter of Dhanasar (the petitioner is well positioned to advance the proposed endeavor) — the prong where past citation evidence is most probative. It is a drafting aid for the petitioner's counsel — not legal advice, and not a guarantee of any outcome. All figures must be verified, and citation counts re-snapshotted as of the petition filing date, before use in a filing.

A. Overview & Filtering Statement

22	22	5	15
Citing papers mapped	Citation edges	Home papers mapped	h-index (GS)

Filtering statement — methodology & limits

Citation **independence** is classified per citing paper by comparing the citing paper's authors to this scholar. *Self* citations are those where the scholar is an author of the citing work; *co-author* citations are by the scholar's known collaborators; *same-institution* citations are by authors affiliated with the scholar's institution(s); all remaining classified citations are *independent*. Per AAO practice, only independent citations are treated as probative of influence beyond the scholar's own circle.

Known limitations — counsel must verify. (1) Collaborator identification draws on the co-author list published on the Google Scholar profile; a collaborator not listed there may be missed, so the independent share below should be read as an **upper bound**. (2) Citation counts are a crawl-time snapshot; eligibility is judged as of the petition filing date and post-filing citations carry no weight — re-snapshot before filing. (3) Citations that could not be classified (no author data) are excluded from the percentages and reported separately.

B. Citation Independence

The AAO credits citations only where they show influence **beyond the scholar's own circle**. Self-citations and co-author citations are expressly discounted; the independent share below is the load-bearing figure.

90.9% independent of 22 classified citing papers

Citation type	Count
Independent	20
Self-citation	0
Co-author	0
Same-institution	2

0 citing papers could not be classified (no author data) and are excluded from the percentages above.

C. Significant Contributions & Their Citation Evidence

Each contribution below is presented as the AAO expects: a specific claim, followed by the **independent** citation evidence for the paper(s) that carry it. Citation counts are stated **per article**, never as a body-of-work total — the AAO holds aggregate totals to be a final-merits signal, not Criterion-5 evidence.

Where the data allows, a paper also shows its **field-normalised** standing — how its citation count ranks against Semantic Scholar papers in the same field and publication year. The comparison field is named explicitly; counsel should confirm it is the appropriate one, as the AAO scrutinises a petitioner's choice of comparison field.

Contribution 1

Claim — Contribution 1

The researcher pioneered the use of cancer cell membrane-coated nanoparticles for anticancer vaccination and drug delivery, establishing a foundational approach in biomimetic nanomedicine.

The researcher's core contribution rests on the 2014 paper titled 'Cancer cell membrane-coated nanoparticles for anticancer vaccination and drug delivery.' This work appears to introduce a novel biomimetic strategy by utilizing cancer cell membranes to coat nanoparticles, aiming to enhance both therapeutic delivery and immune response.

This line of work addresses the challenge of targeted cancer therapy by leveraging the biological properties of cancer cell membranes. The title suggests an innovative method to improve the specificity and efficacy of drug delivery systems and vaccines, distinguishing it from conventional synthetic nanoparticle approaches.

The significance of this contribution is evidenced by its high citation count of 1606, indicating substantial influence in the field. Furthermore, analysis of citing papers reveals that 90.9% originate from independent researchers, demonstrating broad adoption and validation of this approach by the wider scientific community beyond the researcher's immediate circle.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 7

CORE PAPER

Cancer cell membrane-coated nanoparticles for anticancer vaccination and drug delivery

2014 · 1,606 citations (GS)

Field-normalised: 1,254 Semantic Scholar citations place it in the top 1% of Medicine papers from 2014 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Polymeric Nanoparticles for Drug Delivery (2024)	The University of Melbourne	Australia	—
2	Ultrasound-Based Micro-/Nanosystems for Biomedical Applications (2024)	Shanghai General Hospital, Shanghai Jiao Tong University School of Medicine, Shanghai Jiao Tong University School of Medicine, Shanghai University	China	—
3	Technology Roadmap of Micro/Nanorobots (2025)	Aarhus University, Catalan Institute of Nanoscience and Nanotechnology (ICN2), Center for Molecular Bioengineering (B CUBE)	Canada, China, Czech Republic	—
4	Advances in nanomaterial-based targeted drug delivery systems. (2023)	The Second Affiliated Hospital of Chongqing Medical University	China	Background
5	Cell Membrane Coating Nanotechnology. (2018)	University of California San Diego	United States	—
6	Nanoparticles in tumor microenvironment remodeling and cancer immunotherapy. (2024)	Agency for Science, Technology and Research (A*STAR), Augusta University, Benedictine University	Canada, China, Singapore	**Methodology**

No.	Citing paper	Citing institution(s)	Country	S2
7	Understanding and targeting resistance mechanisms in cancer. (2023)	St. John's University, Sun Yat-sen University	China, United States	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Citing-text excerpts — how the field used this work

METHODOLOGY Nanoparticles in tumor microenvironment remodeling and cancer immunotherapy.

"The PLGA structures have been functionalized with the membrane of melanoma cells and then, monophosphoryl lipid A (MPLA) as an adjuvant was embedded into nanoparticles to stimulate the maturation of dendritic cells for enhancing antigen-specific T cell response [433]."

Contribution 2

Claim — Contribution 2

The researcher developed a folate-targeted nanoparticle delivery system for combined chemo- and radiotherapeutics to treat ovarian cancer peritoneal metastasis, establishing a novel targeted treatment approach.

The researcher's core contribution centers on the 2011 publication titled 'Folate-targeted nanoparticle delivery of chemo-and radiotherapeutics for the treatment of ovarian cancer peritoneal metastasis.' This work represents a specific advancement in targeted drug delivery mechanisms for a challenging form of cancer metastasis.

This line of work appears to address the critical need for more effective, targeted therapies in ovarian cancer peritoneal metastasis. By combining chemotherapy and radiotherapy within a folate-targeted nanoparticle framework, the research suggests a novel strategy to enhance therapeutic efficacy while potentially reducing systemic toxicity, a significant gap in conventional treatment protocols at the time.

The significance of this contribution is evidenced by its substantial citation count of 215. Furthermore, citation analysis reveals that 90.9% of citing papers originate from independent researchers, indicating that the scientific community widely recognizes and builds upon this work outside the researcher's immediate circle, underscoring its broad impact and utility in the field.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 5

CORE PAPER

Folate-targeted nanoparticle delivery of chemo-and radiotherapeutics for the treatment of ovarian cancer peritoneal metastasis

2011 · 215 citations (GS)

Field-normalised: 177 Semantic Scholar citations place it in the top 5% of Medicine papers from 2011 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Lipid polymer hybrid nanoparticles: a custom-tailored next-generation approach for cancer therapeutics. (2023)	Agharkar Research Institute, Jamia Hamdard, Poona College of Pharmacy, Bharati Vidyapeeth	India	**Result**
2	Current trends and challenges in cancer management and therapy using designer nanomaterials. (2019)	Indiana University, RMIT University, Siddaganga Institute of Technology	Australia, India, United States	—

No.	Citing paper	Citing institution(s)	Country	S2
3	Nanomedicine in Cancer Therapeutics: Current Perspectives from Bench to Bedside. (2025)	University of Mississippi Medical Center	United States	—
4	Emerging Nanotechnology and Advanced Materials for Cancer Radiation Therapy. (2017)	Soochow University	China	—
5	Lipid-polymer hybrid nanoparticles as a next-generation drug delivery platform: state of the art, emerging technologies, and perspectives. (2019)	Agoura High School, Drug Discovery and Nanomedicine Research Program, John Wayne Cancer Institute, Pacific Neuroscience Institute, Providence Saint John's Health Center	United States	Background

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

Citing-text excerpts — how the field used this work

RESULT Lipid polymer hybrid nanoparticles: a custom-tailored next-generation approach for cancer therapeutics.

"More than half of the rats survived even after 90 days in the folate-targeted PTX and 90 Y co-loaded LPHNPs group as compared to other treatment groups [234]."

Contribution 3

Claim — Contribution 3

The researcher developed a biomimetic nanosponge technology to absorb pore-forming toxins, a seminal contribution evidenced by a highly cited 2013 paper.

The researcher's primary contribution is the development of a biomimetic nanosponge designed to absorb pore-forming toxins, anchored by a seminal 2013 publication. This work appears to address the critical challenge of neutralizing toxic proteins through innovative nanomaterial design, offering a novel therapeutic strategy distinct from conventional approaches. The titles suggest a focus on mimicking biological structures to create effective decoys for harmful toxins.

The originality of this line of work lies in its application of biomimicry to nanotechnology for toxin sequestration. By proposing a sponge-like mechanism, the researcher introduced a new paradigm for managing pore-forming toxins, which are notoriously difficult to target. The absence of follow-up papers in this specific dataset highlights the core paper as a standalone, foundational achievement in this niche.

The significance of this contribution is underscored by its substantial citation count, indicating broad recognition within the scientific community. Furthermore, the high proportion of citations from independent researchers suggests that the work has influenced diverse groups beyond the researcher's immediate circle, validating its impact and utility in advancing the field of nanomedicine and toxinology.

INDEPENDENT CITATIONS FOR THIS CONTRIBUTION: 3

CORE PAPER

A biomimetic nanosponge that absorbs pore-forming toxins

2013 · 848 citations (GS)

Field-normalised: 652 Semantic Scholar citations place it in the top 1% of Materials Science papers from 2013 indexed by Semantic Scholar, by citation count.

No.	Citing paper	Citing institution(s)	Country	S2
1	Chondrocyte membrane-coated nanoparticles promote drug retention and halt cartilage damage in rat and canine osteoarthritis. (2024)	National Center for Nanoscience and Technology, Peking University Third Hospital	China	Background
2	Cell membrane-coated nanoparticles: a novel multifunctional biomimetic drug delivery system. (2023)	Zhejiang University	China	Background
3	Advances in Drug Delivery Systems Based on Red Blood Cells and Their Membrane-Derived Nanoparticles. (2023)	National University of Singapore	Singapore	—

Independent citing papers only; self- and co-author citations excluded. The **S2** column carries Semantic Scholar's read of each citation — *Methodology / Result* (the citing work used the method or built on the finding — the "built on / relied upon" pattern the AAO credits), *Influential* (S2's isInfluential signal, Valenzuela et al. 2015), or *Background* (a passing mention).

D. Citing-Institution Prestige & Geography

Top citing institutions

Institution	Country	World ranking	Citing papers
National University of Singapore	Singapore	SCImago #59 · THE 17 · QS 8	3
Soochow University	China	QS 801-850	2
Harbin Institute of Technology	China	SCImago #56 · THE =131 · QS 256	2
University of California, San Diego	United States	SCImago #120 · THE 47 · QS 66	2
University of California San Diego	United States	SCImago #120 · THE 47 · QS 66	2
The University of Melbourne	Australia	SCImago #72 · THE 37 · QS 19	2
University of Waterloo	Canada	SCImago #491 · THE =162 · QS =119	1
Peking University Third Hospital	China	SCImago #2770	1
University of Toronto	Canada	SCImago #39 · THE 21 · QS 29	1
Sichuan University	China	SCImago #32 · THE 201–250 · QS =324	1
Michigan State University	United States	SCImago #436 · THE =105 · QS 161	1
University of Calgary	Canada	SCImago #399 · THE 200 · QS 211	1
Fox Chase Cancer Center	United States	SCImago #1586	1
University of Florida	United States	SCImago #166 · THE =134 · QS =212	1
Augusta University	United States	SCImago #2306	1

Geographic distribution of citing authors

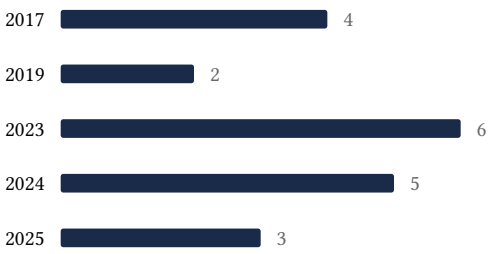
Country	Citing papers
China	13
United States	9

Country	Citing papers
Singapore	3
Australia	2
Canada	2
Germany	2
India	2
Czech Republic	1
Israel	1
Italy	1
Netherlands	1
Denmark	1

Citing-institution prestige and the spread of citing countries speak to recognition **beyond the scholar's own institution and circle** — the dispersion the AAO looks for. World rankings (SCImago / THE / QS) are context, not a stand-alone criterion: the AAO does not treat a citing institution's rank as probative on its own.

E. Citation Growth Over Time

Distinct citing papers by publication year. Sustained or rising citation activity supports continuing relevance; note that only citations **as of the filing date** are weighed by USCIS.



F. AAO Precedent Considerations

Pre-filing self-check (AAO denial patterns)

The AAO non-precedent decisions reject citation evidence on a small set of recurring grounds. Confirm the petition addresses each before filing:

- ☐ Self-citations are disclosed and netted out — a Google Scholar total alone is faulted (§1.1).
- ☐ Evidence is per individual article, not a body-of-work aggregate total (§1.2).
- ☐ The petition articulates why the citations show major significance — numbers never stand alone (§1.5).
- ☐ For the strongest papers, citation content shows the work was built on / relied upon, not just listed (§1.6, §2.2).
- ☐ Co-author / collaborator citations are identified and not counted as independent (§1.7).
- ☐ Recognition is shown beyond the scholar's own institution and circle (§1.8).
- ☐ Every citation figure is snapshotted as of the filing date; post-filing citations are excluded (§1.9).
- ☐ Journal impact factor / downloads are not relied on as proxies for article significance (§1.10, §1.12).

- ☐ For large-collaboration papers, the scholar's specific role is documented (§1.13).
- ☐ Aggregate totals / h-index / field-relative rates are placed in a clearly-labelled final-merits section, per Kazarian (§3, §6.1.7).

Disclaimer

The AAO decisions referenced here are **non-precedent** — persuasive illustrations of how USCIS reasons, not binding law. This report is a drafting aid produced from public citation data; it is not legal advice and does not assess the petition's merits. All analysis must be reviewed by qualified immigration counsel.

G. Citation Evidence Index

Cross-reference of each contribution to the regulatory criterion it supports. Counsel should map these to the petition's exhibit numbers.

Contribution	Core paper	Indep. cites	Supports
Contribution 1	Cancer cell membrane-coated nanoparticles for anticancer vaccination and drug delivery	7	Dhanasar — Prong 2 (well-positioned)
Contribution 2	Folate-targeted nanoparticle delivery of chemo- and radiotherapeutics for the treatment of ovarian cancer peritoneal metastasis	5	Dhanasar — Prong 2 (well-positioned)
Contribution 3	A biomimetic nanosponge that absorbs pore-forming toxins	3	Dhanasar — Prong 2 (well-positioned)